

545oneDrive2_00014723

EPAct Light Duty Exhaust Fuel Effects Test Program

Cost and timing feedback
from SwRI

Base Fuel Matrix (Cont'd)

- Original scope of program: Tier 2 fuel effects
- Design optimized to allow analysis of parameters and their interactions
- Fuel variables:
 - T50 (3 levels)
 - T90 (2 levels)
 - EtOH (2 levels)
 - RVP (2 levels)
 - Aromatics (2 levels)
- 16 fuels, 19 vehicles
- VOC speciation, some 50 deg, no PM speciation
- Original cost estimate = \$4.2M
- Southwest estimate **Ex. 4 - CBI**

Proposed Program

- **Ex. 4 - CBI** Base program with VOC speciation
- **Ex. 4 - CBI** GHG Study w/ 3 fuels (E0, E10, E15), also includes VOC speciation
- **Ex. 4 - CBI** Measurement of N₂O, NH₃ and HCN
- **\$3.45M: Total**
- Additional PM speciation work in-house (?)
 - additional **Ex. 4 - CBI**

Program Timeline

- Jan. 2008 – March 2008: Fuel blending
- April 2008 – March 2009: Emissions testing
 - GHG fuels complete by Summer 2008
 - PM speciation complete by Fall 2008
- March 2009 – May 2009: Reporting
- Program schedule could be accelerated through:
 - Second shift work
 - Use of additional test cells
- Selected segments of test program could be executed shortly after launch

Related / Ongoing Testing

Small Engine Ethanol Study

- 8 engines E0/E10
- Costs
 - Projected Total Cost:
 - Funded (FY06 RFS):
 - Additional Funds Needed:

Ex. 4 - CBI

Nonroad Pilot Project

- 66 in-use equipment pieces w/ PEMS or PAMS
- Phase 1 & 2 Summer '07; completion planned for Spring '08
- Costs
 - Projected Total Cost: \$1,710,000
 - Funded (mostly Fees): \$1,450,000
 - Additional Funds Needed: \$ 260,000
 - CRC Funding for additional tests and fuel/oil analysis \$ 150,000

